

PS-2-500F  
Wide Band  
In Phase  
Two Way Hybrid  
Combiner/Divider  
10-500 MHz



### DESCRIPTION

A two-way in-phase hybrid power combiner/divider is a 180° hybrid power combiner/divider with the difference port (A) internally terminated.

As a two-way power divider, a signal fed into the input port yields two in-phase output signals 3 dB down from the input power.

As a two-way power combiner, signals applied to the output ports yield a vector sum at the input port.

Multi-way binary power combiners/dividers are realized by cascading combinations of the basic two-way device. The power division ratio of the multi-way combiner/divider is 1/n.

### GUARANTEED MINIMUM PERFORMANCE DATA

Frequency Range	10-500 MHz
Insertion Loss:	0.6 dB Max.
Amplitude Balance	0.15 dB Max.
Phase Balance	1.0° Max.
Isolation	25 dB Min.
VSWR (All ports)	1.5:1 Max.

### ABSOLUTE MAXIMUM RATINGS:

Input power 1 W (1/20 Watt Internal Load Dissipation)  
Temperature Range - 54°C to + 100°C

### ENVIRONMENTAL CONDITIONS

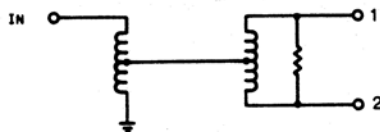
#### GUARANTEED ENVIRONMENTAL PERFORMANCE:

All units are designed to meet their specifications over - 54°C to + 100°C after exposure to any or all of the following tests per MIL-STD-202E.

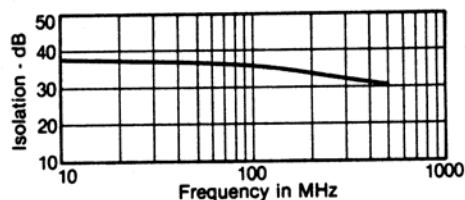
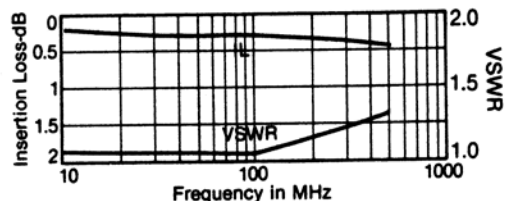
Exposure	Method	Test Condition
Thermal Shock	107D	B
Altitude	105C	G
H.F. Vibration	204C	D
Mechanical Shock	213B	C
Random Vibration	214	IIF
(15 minutes per axis)		
Solderability	208C	
Terminal Strength	211A	C
Resistance to Soldering Heat	210A	B

Sealed units, meet the requirements of Method 106D of MIL-STD-202E when exposed to humidity.

### FUNCTIONAL SCHEMATIC



### TYPICAL PERFORMANCE



### PACKAGE

#### CASE MATERIAL:

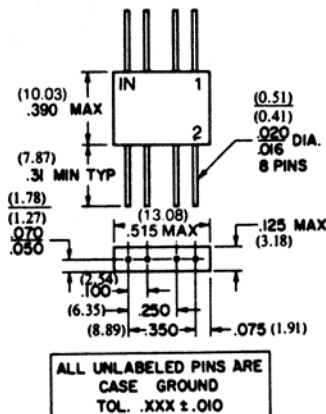
F15 Kovar per ASTM Std. F-15-68. (Chemical composition per MIL-STD-1276, Type K)

#### FINISH:

Plating, all metal parts: gold per MIL-G-45204, Type I, Grade A, Class I over nickel per MIL-C-26074, Class 1

#### LEADS:

Kovar per MIL-STD-1276, Type K



Specifications subject to change without notice.